The Byrth of Mankynd

An exhibition of books illustrating the history of obstetrics selected from the Jason A. Hannah Collection in the History of Medical and Related Sciences

Thomas Fisher Rare Book Library
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This exhibition of books selected from the Jason A. Hannah Collection in the History of Medical and Related Sciences traces the development of the art and science of obstetrics from the time of the first crude printed books for midwives in the early 16th century to the major scientific triumphs of the mid-19th century. While it is true, as the old saying has it, that 'folks do get born' without the aid of obstetricians or obstetrical books, the works displayed in this exhibition tell a story of genuine progress and remarkable achievement.

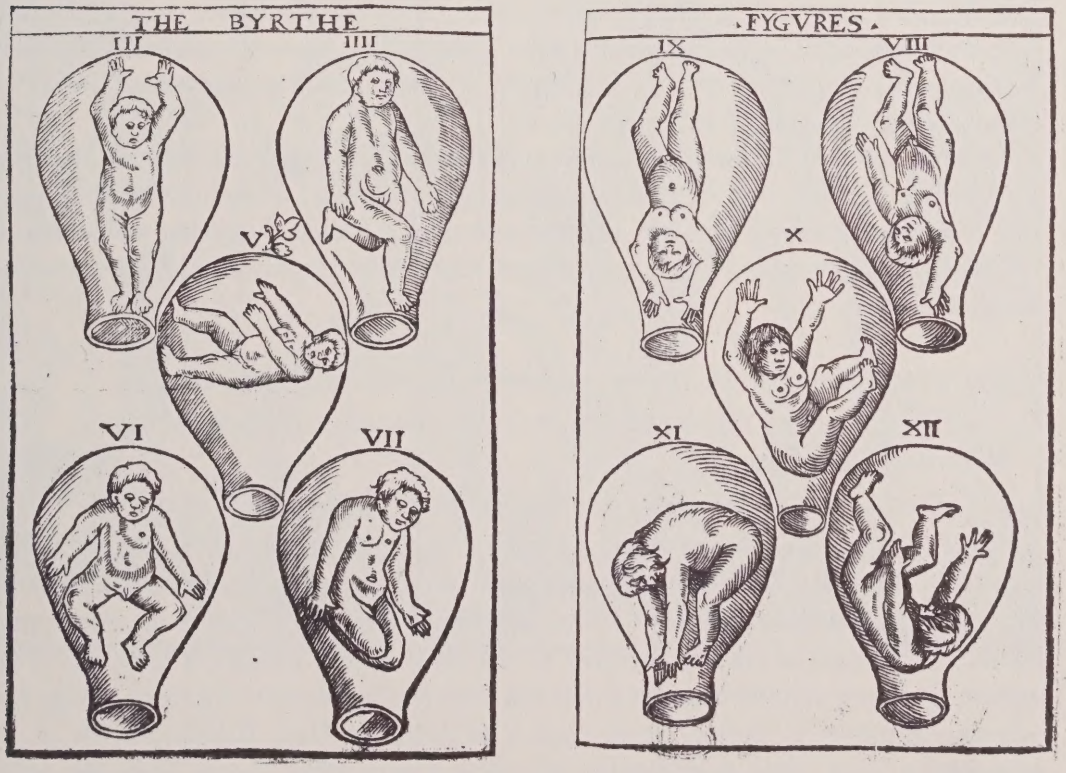
It is hoped that this exhibition will convey an idea of the strength of the Hannah Collection in the area of obstetrics and that the notes provided in this catalogue will throw some light on the major developments and personalities involved.

IAN CRELLIN

Case 1. The Earliest Printed Books for Midwives

THOMAS RAYNALDE, fl. 1540-1551. *The byrth of mankynd; otherwyse named, The Womans boke.* Newly set forth, corrected and augmented ... by Thomas Raynald, physition. London, 1552.

Knowledge of obstetrics was at a very rudimentary stage in England when Jane Seymour, third wife of King Henry VIII, died from puerperal sepsis shortly after having given birth to the future Edward VI in 1537. There were, in fact, no English books at all on the subject. The first appearance of Raynalde's *Byrth of mankynd* only three years



THOMAS RAYNALDE. *The byrth of mankynd.* 1552.

later, has given rise to the suggestion that it was the untimely death of Jane Seymour – apparently the only wife whose passing Henry mourned – from a disease commonly associated with childbirth, that turned the thoughts of British medical men to improving the state of obstetrical knowledge. Be that as it may, the *Byrth of mankynd,* although certainly not original in content being essentially a translation of the work of Roeslin (q.v.), was the first English book for midwives and an immediate success. Raynalde's words in the Prologue to succeeding editions might be taken for self-promotion: 'There be since the first setting forth of this booke, right many honourable ladyes ... which have not disdained the oftener by occasion of this booke, to frequent and haunt women in their labours, carrying with them this booke in their hands, and causing such part of it as doth chiefly concern the same purpose to be read before the midwife and the rest of the women there being present ...' In fact, the *Byrth of mankind* filled an important gap and was published as late as 1654, only then being displaced by more scientific works.

The edition displayed is the third edition of 1552, in an enlarged translation by Thomas Raynalde, physician and printed by Thomas Raynalde, printer.

EUCHARIUS ROESLIN, d. 1526. *De partu hominis.* Parisiis, 1535.

Fourteen centuries elapsed between the obstetrical writings of the ancient authorities and their revival by Eucharius Roeslin in 1513. The first printed book for midwives was by no means an original work, the text being compiled from extant manuscripts of the works of earlier writers, chief among them the second century A.D. Soranus, as improved by his pupil Moschion. Even the diagrams of the birth figures which illustrate Roeslin's book have been traced back to a 9th century manuscript of Moschion and may be of even earlier origin. These figures, which represent the various positions of the *foetus in utero,* are both striking and inaccurate. They show a rather over-developed foetus, in some cases twins, performing what seems to be a series of gymnastic exercises in a flask-shaped uterus. These figures, copied by Roeslin from ancient sources, were in turn copied by Raynalde and Rüff (q.v.).

Roeslin's work for midwives first appeared in the vernacular in 1513 under the title *Der swangern Frawen und Hebammen Roszgarten,* commonly known as the *Rosengarten.* It was enormously popular, appearing in over a hundred separate editions and issues. Displayed here is the first Latin edition from which the *Byrth of Mankynd* translation was made.

JAKOB RÜFF, 1500-1558. *De conceptu et generatione hominis.* Tiguri, 1554.

———. *Ein schön lustig Trostbüchle von den Empfengknussen und Geburten der Menschen.* Zürych, 1569.

———. *De conceptu et generatione hominis.* Francofurti ad Moenum, 1587.

Rüff was responsible for the education of midwives in Zurich when his work first appeared. Three separate editions are displayed here, not because of the importance of the text, which mainly follows Roeslin, with the addition of a section on monstrous births, but because of what is revealed by the illustrations. Displayed from the 1554 edition (first year of publication) is a woodcut showing the dissected figure of a pregnant woman, re-drawn in greater detail from a woodcut by Hans Baldung-Grien in an anatomy of 1541; close examination will show a very small foetus. From the 1569

edition is displayed a woodcut representing a typical 16th century birth chamber; the resting mother is attended by a number of women, one of whom is preparing to bathe the newly-born child in a wooden tub. Editions published after 1580, including that of 1587, contain splendid woodcuts by Jobst Amman. His famous illustration of a birth scene shows the parturient mother seated on the traditional birth stool, the midwife at work on a low stool before her, scissors and twine on the table to the left for cutting and tying the umbilical cord and, in the background, two astrologers preparing to cast the horoscope at the appropriate moment.

JACQUES GUILLEMEAU, 1550-1613? *Childbirth; or, The Happy deliverie of women.* London, 1612.

The midwife has been variously portrayed in the history of obstetrics, sometimes as efficient and indispensable, setting off in the middle of the night with her birth stool to perform her ancient and hallowed duties, other times as bedraggled and uneducated, knowing nothing of anatomy or physiology, and occasionally doing as much harm as good. In his work for midwives Guillemeau took the opportunity, as many other writers on the subject did, of setting out the ideal qualifications for a midwife: 'She must bee of an indifferent age ... well composed of body, not being subject to any diseases ... neat in her apparell and person, especially having little hands & not thicke ... She must bee pleasant, merry, of good discourse, strong, painfull, and accustomed to labour ... Concerning her behaviour, she must bee mild, gentle, courteous, patient, sober, chast ... nor a blabber or reporter of anything she shall either heare or see in secret.'

Case 2. Anatomy: the Pregnant Uterus

CHARLES ESTIENNE, 1504-1564. *De dissectione partium corporis humani libri tres.* Parisiis, 1545.

By an unfortunate delay in publication, Estienne's beautiful anatomical atlas was rendered out of date by the time it was published. Although many of the drawings were completed by 1539, the work as a whole did not appear until 1545, two years after the publication of Vesalius' *De fabrica* which revolutionized the study of human anatomy. A member of the famous Estienne family of French scholar-printers, Charles elected to study medicine and subsequently performed dissections upon which the present work is based. The woodcuts of the *De dissectione* are striking but in the main anatomically incorrect. The cut displayed shows twins *in utero* removed from their natural positions and seemingly manipulated by cords from the mother's hand. Close examination of the cut reveals another curious feature – the dissected area of the figure is cut and printed from a separate block, suggesting that the figure as a whole may have served some other non-anatomical purpose.

LEONARDO DA VINCI, 1452-1519. *Corpus of the anatomical studies in the collection of Her Majesty the Queen at Windsor Castle.* London, 1978-80.

Leonardo's anatomical drawings occupy a marginal place in the history of obstetrics in so far as they were done to further the study of art rather than science. Moreover, their distribution must have been extremely limited. The drawings disappeared for several centuries and it was not until 1916 that they were published in their entirety. But Leonardo's drawings of the *foetus in utero,* done in 1501, must be included here by virtue of their accuracy and beauty. The note accompanying the largest drawing, translated from Leonardo's Italian mirror-writing reads: 'In this child the heart does not beat and it does not breathe because it rests continually in water, and if it breathed it would drown. And breathing is not necessary to it because it is vivified and nourished by the life [vital spirit] and food of the mother.' The reproductions displayed here are from a superb facsimile edition of the drawings in the collection of Windsor Castle, recently published by the Johnson Reprint Corporation.

WILLIAM SMELLIE, 1697-1793. *A sett of anatomical tables.* London, 1754.

The plate displayed from this work, representing twins *in utero,* after a drawing by the artist Rymsdyk, forms a remarkable contrast to Estienne's treatment of the same subject of two centuries earlier. The *Sett of anatomical tables* was intended to accompany Smellie's *Treatise on the theory and practice of midwifery* (q.v.) and its highly accurate plates fulfil his intention to '... shew everything that might conduce to the improvement of the young practitioner ... the situation of the parts being more particularly attended to, than a minute anatomical investigation of their structure.'

THOMAS DENMAN, 1733-1815. *A collection of engravings, tending to illustrate the generation and parturition of animals, and of the human species.* London, 1787.

One of the mistaken beliefs concerning obstetrics that lingered from antiquity was that the foetus rested in a sedentary position in the uterus for most of the pregnancy and only turned its head downward at or near the time of parturition. In his *Introduction to the practice of midwifery* (q.v.) Denman presents a correct description of the position of the *foetus in utero:* '... such as is the situation of the child in the early part of pregnancy, such it will be at the time of labour.' In the plate displayed from the *Collection of engravings,* the foetus is represented in the normal, head-downward position with the accompanying note: 'as it is our position before we are born, it is also that to which we incline in the decrepitude of old age.'

Case 3. Anatomy: The Pelvis

HENDRIK VAN DEVENTER, 1651-1724. *The art of midwifery improv'd.* London, 1716.

Another ancient belief which hindered the development of obstetrics concerned the structure of the pelvis. It had been believed since time immemorial that the foetus took an active role in forcing its way out of the mother's body and that the pelvic bones were separated somewhat in the process. How else could such a large object move through such a small passage? So rudimentary was knowledge of the pelvis before Deventer's time, that he felt obliged to apologize for even treating of the subject: 'Perhaps it may seem strange to most, to instruct midwives in the knowledge of the pelvis ... but it is my opinion that they are mistaken who think the knowledge of the pelvis useless.' The present work, first published in Dutch and Latin in 1701, went far to establish the idea of the pelvis as a rigid ring whose structure affected delivery and whose deformities caused complications.

JEAN LOUIS BAUDELOCQUE, 1745?-1810. *L'art des accouchemens.* 3. ed. Paris, 1796.

Baudelocque is remembered eponymously in the term 'Baudelocque's diameter', which he defined as 'the thickness of the woman from the middle of the mons veneris to the centre of the depression of the base of the sacrum posteriorly'. The technique of measuring the size of the pelvis as an indication of possible difficulties in birth – pelvimetry – was essentially the invention of Baudelocque. The accuracy attained by him with a caliper-like instrument has only been surpassed in modern times by such techniques as Roentgen (X-ray) pelvimetry.

G.F.B. SIMPSON, editor. *The Edinburgh stereoscopic atlas of obstetrics.* London, 1908-09.

The introduction of photography in the mid-19th century made possible very life-like, although not necessarily superior, representations of anatomical specimens. In this work, the technique of photography has been combined with the principle of stereoscopy to enable the student of obstetrical anatomy to study specimens 'with as much accuracy', the editor writes, 'as if he had the actual preparation in his hands'. A number of the views in this set are devoted to the structure of the pelvis.

FRANZ KARL NAEGELE, 1778-1851. *Das schräg verengte Becken.* Mainz, 1839.

Distorted and contracted pelves have always presented the greatest obstacle to safe childbirth. Infant-destructive operations such as embryotomy and craniotomy were frequently resorted to in the earlier period where normal delivery was impossible. Naegele's work is devoted to one particular kind of pelvic deformity – the obliquely contracted pelvis, known eponymously as 'Naegele's pelvis.' Naegele observed, over a period of several decades, approximately forty cases in which one half of the pelvis was distorted, thereby producing a contraction of the entire pelvic area and causing great difficulties for parturition.

Free-standing Case. Anatomy: The Work of William Hunter

WILLIAM HUNTER, 1718-1783. Doc.[tor] Hunter's Course of anatomical and chirurgical lectures. London, 17 – .

Hunter and Smellie were the two dominating figures in British 18th century obstetrics. Hunter, unlike Smellie, was possessed of the character and social graces which enabled him to establish a large and lucrative practice among the upper classes. Like Smellie however, he believed in the importance of teaching and channelled the wealth from his practice into the establishment of an anatomical school and museum on Great Windmill Street in London, where he fulfilled his self-appointed task as a 'Breeder of anatomists.' He regarded anatomy as 'the only solid foundation of medicine; it is to the physician and surgeon what geometry is to the astronomer.' Displayed is a particularly fine manuscript, in English, dating from the mid-18th century, of a course of lectures delivered at the anatomy school, most likely by Hunter himself, with the help of one of his assistants William Cruikshank or William Hewson. The manuscript is chiefly devoted to anatomy in spite of the title but two of the lectures are devoted to the management of labour and obstetrical surgery.

WILLIAM HUNTER. *Anatomia uteri humani gravidi tabulis illustrata.* Birmingham, 1774.

Hunter believed that the study of the anatomy of the pregnant woman lagged behind other branches of anatomy because of the limited opportunities to acquire suitable subjects. But '... in the year 1751 the author met with the first favourable opportunity of examining, in the human species, what before he had been studying in brutes. A woman died suddenly, when very near the end of her pregnancy; the body was procured before any sensible putrefaction had begun; the season of the year was favourable to dissection, the injection of the blood-vessels proved successful; a very able painter in this way was

found ... In the course of some months, the drawings of the first ten plates were finished ...' It was to be some twenty-three more years before Hunter had dissected enough subjects to publish his *Anatomia* but the result has been universally acknowledged as the finest work of its kind ever published. The presswork of the renowned Baskerville Press, the draughtsmanship of the 'very able painter' (Rymsdyk) and the skill of the engravers (Mitchel, Grignion, et al.) combined to produce a truly stunning atlas which is unlikely to be surpassed.

WILLIAM HUNTER. *An anatomical description of the human gravid uterus and its contents.* London, 1794.

Hunter's full anatomical descriptions for the plates in the *Anatomia* were published posthumously by his nephew Matthew Baillie. In Baillie's estimation, which has been borne out by recent authorities, Hunter's most important anatomical contribution was the discovery and description of the *decidua reflexa* (the lining of the pregnant uterus).

Case 4. Operations and Instruments

C. SUETONIUS TRANQUILLUS. *Suetonius Tranquillus cum Philippi Beroaldi et Marci Antonii Sabellici commentariis.* Venetiis, 1506.

The operation called Caesarean section, in which the foetus is removed through an incision in the abdominal wall of the mother, has until recent times been the most dramatic and dangerous of the operative techniques available to the obstetrician in the case of unusually difficult labours. The operation was performed in ancient times but only as a last resort to save the life of the child where the mother was dying or already dead. References to the date of the first successful operation – that is with the preservation of the life of both mother and child – vary, but one documented case, in which both mother and child survived the operation, is recorded in 1610. The mother died some weeks later but this was not suprising given that at that time there was obviously no effective control over infection and haemorrhage. The first successful case in the United States was reported in 1738. The theory that Julius Caesar was delivered by a section and thus gave his name to the operation is probably false. The mother pictured in the famous illustration of a Caesarean section which accompanies Suetonius' life of Julius Caesar is clearly dead, as was required for the performance of the operation at that time but there is ample evidence that Caesar's mother lived for many years after his birth.

GIROLAMO MERCURIO, d. 1615. *La commare oriccoglitrice.* Venetia, 1601.

The introduction of Caesarean section as a life-saving operation for both mother and child owes a great deal to Mercurio. He claimed to have seen the operation performed successfully twice in Toulouse in 1571 and although it is not clear whether or not he actually performed it himself, Mercurio provides a detailed description in his work on midwifery. The possibilities of infection, haemorrhage and the lack of any effective anaesthetic rendered Caesarean section enormously difficult and hazardous yet Mercurio felt that it was called for where normal delivery was clearly impossible in cases of

C Sito primo neceſſario al parto Ceſareo, nel quale ſi debbono collocare quelle grauide, che non poſſono hauere i figliuoli ſe non col taglio: ma però quelle ſolamentè, che ſono gagliarde.

D. Sito ſecondo del parto Ceſareo, nel quale ſi collocano le grauide deboli.

GIROLAMO MERCURIO. *La commare oriccoglitrice.* 1601.

contracted pelvis. It would have required an unusual amount of courage on the part of the surgeon to perform Caesarean section in the 16th century, for his reputation as well as the lives of the mother and child was at stake. As Mercurio writes: 'Not every surgeon is fitted to effect Caesarean delivery, but the one who has had experience, is brave, is prudent, and above everything else is a skilled anatomist – in order that he may know how far he must penetrate with the blade ... [and] if perchance the parturient woman should die during the operation even though she should die from the pain endured, all the blame would fall on the operation and not on the other.'

AMBROISE PARÉ, 1510?-1590. *Deux livres de chirurgie.* Paris, 1573.

The operation of podalic version – the turning of the foetus while in the uterus so that it may be delivered by manual traction on the feet when normal delivery is impossible – was first described by Soranus in the 2d century A.D. and was revived by Paré in the mid-16h century. The procedure as described by Paré required a high degree of manual dexterity: 'And when hee findeth that hee [the child] commeth naturally, with his head toward the mouth or orifice of the womb, hee must lift him up gently, and so turn him that his feet may come forwards ...'. The surgeon must then draw one foot from the womb, secure it with a 'soft or silken band', return it to the womb and then draw out the other foot. After securing this foot in a similar manner, he may then draw out the first foot again, and then by means of the bands' by little and little let him draw all the whole bodie from the womb'.

THE USE OF THE forceps in obstetrical practice in the 18th century was attended with much discussion regarding their relative danger or harmlessness. Suffice to say, at this point, that the use of this instrument has saved the lives of many children which might otherwise have been lost. Extractive instruments used in the early period covered by this exhibition were entirely destructive in purpose, that is they were used to dismember the foetus if delivery was impossible. Rüff did illustrate in his book on midwifery an instrument which resembles the modern forceps in that it has smooth blades, but it is likely that this was simply one of the instruments from the surgeon's *armamentarium*, possibly used for some other purpose. There seems to be no evidence that forceps were used to deliver a living baby until the time of the Chamberlens. This remarkable family, of Dutch origin but practising in England, developed during the early part of the 17th century the forceps as a harmless, i.e. non-destructive instrument and managed to keep the secret of its structure and use for over a century. A French obstetrician, De La Motte, condemned this secrecy: 'He who keeps secret so beneficial an instrument as the harmless obstetrical forceps, deserves to have a worm devour his vitals for all eternity', but others have pardoned the Chamberlens on the grounds that trade practices have always been a matter for secrecy. A 20th century work on the obstetrical forceps lists over three hundred different models but the essential features of the instrument were laid down by the Chamberlens and their 18th century followers – Chapman, Giffard, Smellie, and Levret.

EDMUND CHAPMAN, 1680?-1756. *A treatise on the improvement of midwifery.* The 2d ed. London, 1735.

That 'wherever a man comes, the mother, or child, or both, must necessarily die' was a commonly expressed fear at the end of the 17th and well into the 18th century for the use of instruments was a male prerogative and the distinction between 'harmless' and 'destructive' instruments was not yet clear. Edmund Chapman was one of the first obstetrical writers to defend the forceps against the charge of being a 'barbarous' instrument and was, in fact, the first to publish a description of it in the first edition of this work in 1733. In the edition displayed appears one of the earliest illustrations of the forceps. Chapman claimed that by 1733, the use of the instrument which had been kept a secret for so long by the Chamberlens was well known to 'all the principal men of the profession both in town and country.'

WILLIAM GIFFARD, fl. 1734. *Cases in midwifry.* London, 1734.

Giffard's work on midwifery was published posthumously by his friend Edward Hody and consists of a description of two hundred and twenty five difficult or dangerous cases to which he had been summoned by a midwife. In a case headed 'The back part of the head presenting', Giffard provides the first published account of the use of the forceps to assist delivery. In this particular case, however, the 'extractor', as Giffard called his instrument, would not grip the head securely when pressure was applied and the procedure was unsuccessful. Other successful cases inspired Giffard to claim: 'that a child presenting right, but sticking in the passage, may be brought alive (I won't say always) without either the use of hooks, or lessening the head, contrary to the opinion of most former writers.'

ANDRÉ LEVRET, 1703-1780. *Observations sur les causes et les accidens de plusieurs accouchemens laborieux.* Paris, 1747.

Levret, along with several other men working independently, made a fundamental improvement to the forceps, namely, the addition of the pelvic curve, by means of which the instrument could conform to the curve of the mother's pelvis as well as the curve of the foetal head. For this and other fundamental contributions to obstetrics, Levret acquired a distinguished clientele. It is recorded that when he was called in to deliver the Dauphiness, mother of the future Louis XVI, a lady-in-waiting remarked 'You must be pleased, M. Levret to attend the Dauphiness. That will make your reputation.' Levret is said to have replied 'If my reputation were not already made, I should not be here.'

Case 5. General Obstetrics

WILLIAM HARVEY, 1578-1657. *Exercitationes de generatione animalium.* Londini, 1651.

Harvey's great work on the circulation of the blood, first published in 1628, owed much to the then new scientific spirit of observation and experiment. The present work proceeds on the same principles: 'For in every science', wrote Harvey in the preface, 'diligent observation is requisite and sense itself must be frequently consulted. We must not (I say) rely upon other mens experience, but on our owne.' The *Exercitationes* chiefly consists of an account of the embryological development of non-human species such as the chicken. It does, however, contain a chapter on labour in humans which is replete with practical observations and which is considered to be the first original work on obstetrics by an English writer.

FRANÇOIS MAURICEAU, 1637-1709. *Traité des maladies des femmes grosses, et de celles qui sont nouvellement accouchées* ... Nouvelle edition. Geneve, 1693.

Mauriceau's contributions were so substantial that he has been described as the founder of modern obstetrics. Mauriceau made a break from long-standing tradition by using the bed instead of the birth stool for delivery. Along with Deventer, he helped discredit the ancient belief that the pelvic bones separate during birth by putting it to the test. He reports in the present work, first published in Paris in 1668, 'for anatomy convinceth us clearly ... that these bones are so joined by cartilage, that it is very difficult to separate them with a knife.' Mauriceau's work was enormously influential, especially in England where it was introduced in a translation by Hugh Chamberlen (q.v.).

FRANÇOIS MAURICEAU. *The accomplisht midwife* ... translated and enlarged with some marginal notes by Hugh Chamberlen. London, 1673.

Hugh Chamberlen is known both as a representative of that family responsible for the introduction of the forceps into obstetrical practice, a development with profound consequences for the future of obstetrics, and as the translator who brought Mauriceau's work to England. *The accomplisht midwife* was more than a translation, however. Where Mauriceau had justified the use of infant-destructive instruments in difficult labours, even with the head presenting, Chamberlen strongly deplored this practice. But then Chamberlen possessed the 'secret' which enabled him and the other practitioner-members of his family to accomplish difficult deliveries without harm to either mother or child. De La Motte's condemnation of the Chamberlens for their refusal to divulge

this secret has already been noted. Hugh Chamberlen justified his behaviour in the preface to this translation on the following grounds; 'I will now take leave to offer an apology for not publishing the secret I mention we have to extract children without hooks ... which is, that there being my father and two brothers living, that practise this art, I cannot esteem it my own to dispose of, nor publish it without injury to them.'

WILLIAM SMELLIE, 1697-1763. *A treatise on the theory and practice of midwifery.* The 2d ed., corrected. London, 1752-64.

Smellie was born in Lanark, Scotland and eventually settled in London, where he became one of the commanding figures in the development of obstetrics. Called a 'great horse godmother of a he-midwife' by the redoubtable Elizabeth Nihell (q.v.) because of his success as a man-midwife and his advocacy of the use of instruments in delivery, Smellie remained unmoved by such invective and made major contributions to several aspects of obstetrics. As a practical *accoucheur,* he developed a model of forceps, incorporating a pelvic curve, which is essentially the same as modern models. As a scientist, he reached an accurate understanding of the mechanism of labour. As a teacher of midwifery, his influence was profound. He claimed to have given, during the ten years practice prior to the publication of this *Treatise,* 'upwards of two hundred and eighty courses of midwifery, for the instruction of more than nine hundred pupils, exclusive of female students'. Much of Smellie's teaching was done with a dummy consisting of a real pelvis covered with leather to simulate the muscles, with which he was able to demonstrate various presentations and the mechanics of delivery.

THOMAS DENMAN, 1733-1815. *An introduction to the practice of midwifery.* London, 1788-95.

The degree to which the obstetrician should take an active role in parturition was frequently a matter of debate. Denman belonged to the conservative school which believed in as little intervention as possible, arguing that 'All the errors of practice do not proceed from ignorance of the art. Some of them may justly be imputed to our entertaining too high an opinion of the art or too much confidence in our own dexterity, or too little dependence on the natural efforts and resources of the constitution.' Denman nevertheless believed that there was some justification for the induction of premature labour in certain cases of contracted pelvis and provided the first published description of this technique which could be used in the seventh month of pregnancy and after when the foetal head was smaller and the skull more pliable than when at full term.

CHARLES DELUCENA MEIGS, 1792-1869. *Obstetrics; the science and the art.* Philadelphia, 1849.

Meigs was a prominent Philadelphia obstetrician whose present day reputation is largely characterized by his reactionary attitude to two of the major obstetrical advances of his time. He opposed the use of anaesthetics which were being introduced at that time by such men as Channing (q.v.) and Simpson (q.v.) arguing that 'anaesthesia in midwifery had done more harm than good.' He also rejected outright the contagion theory of puerperal fever, being unable to form, he claimed, any clear idea of what could cause contagion (this was long before the work of Pasteur on the bacteria responsible for the infection) and therefore preferring to attribute the countless deaths that resulted from puerperal fever to 'accident or Providence.'

Case 6. Books for Midwives

LOUISE BOURSIER, 1563-1636. *Observations diverses sur la sterilité, perte de fruict, foecondité, accouchements et maladies des femmes et enfants nouveaux naiz.* Paris, 1609.

The status of the midwife varied from country to country in former times as indeed it does today. The existence in Paris of the great lying-in hospital, the Hôtel Dieu from the 16th century onward, meant a measure of education and certification for French midwives. Louise Boursier was one of the first graduates of the school for midwives and the first of a long line of prominent French midwives. She began her practice among the poor but eventually rose to a position of importance, spending twenty-seven years delivering the babies of the French court and Royal family. With the death of the Princess Marie Bourbon-Montpensier from puerperal sepsis, Boursier's practice fell off precipitously but her *Observations* remained an influential work.

The compleat midwife's practice enlarged ... from the experience of our English, viz. Sir Theodore Mayern, Dr. Chamberlain, Mr. Nich. Culpeper ... With instructions of the Queen of France's midwife. The 3d ed. London, 1663.

The larger part of this work is a translation of Madame Boursier's *Observations.*

The English midwife enlarged. London, 1682.

Written in the form of a dialogue between a physician and a midwife and 'The whole fitted for the meanest capacities', this work is essentially a compilation of material from other authors. Writing from a position of professional and moral authority, the physician-author cautions midwives 'to give no medicine to cause a woman to miscarry of her child; but prudently send such kind of people to the learned physician to deal with ... [and] have a great care whom you lay in your houses, for fear of encouraging naughty women.' Similar warnings are found in other books directed to midwives.

NICHOLAS CULPEPER, 1616-1654. *A directory for midwives.* London, 1651.

Culpeper, a self-styled 'student in physic and astrologie' is an irresistible character in the history of medicine, although this particular work, written for and dedicated to the 'Midwives of England' is of little value, consisting as it does chiefly of astrology, folk lore and remnants of sympathetic magic. The author of a contemporary work, *The compleat midwife's practice enlarged,* held it in very low esteem, writing '*The Directory for midwives* is the most desparately deficient of them all; except he writ it for necessity, he could certainly have never been so sinful to have exposed it to the light.'

A.M. LE BOURSIER DU COUDRAY, 1712-1789. *Abbrégé de l'art des accouchemens.* Saintes, 1769.

Du Coudray was another of the important school of French midwives. Her book is important from the point of view of obstetrical illustration containing the first illustrations printed in colour in an obstetrical work.

MARIE LOUISE LACHAPELLE, 1769-1821. *Pratique des accouchemens.* Paris, 1821-25.

The number of theoretical presentations in labour had been placed at ninety four by the great French obstetrician, Baudelocque. Madame Lachapelle, for some time chief mid-

wife at the Hôtel Dieu in Paris, managed to reduce this unwieldy number to twenty two by analysing over 15,000 deliveries. The chart included at the end of her book presents an interesting statistical breakdown of the deliveries observed between 1800 and 1811 and reveals that in that period there were only 689 still births as opposed to 14,963 live infants.

SAMUEL BARD, 1742-1821. *A compendium of the theory and practice of midwifery.* New York, 1808.

The practice of midwifery in early America necessarily followed European practice, but in 1807, Samuel Bard, Dean of King's College Medical School in New York, perceiving the need for better education for local midwives, wrote his *Compendium*, 'a concise, cheap book containing a set of plain but correct directions' in which he attempted to counteract what he saw as one of the most harmful tendencies of European works. Thus, early editions of Bard's work (which is reckoned the first American work on midwifery) do not include accounts of the use of instruments. Bard was convinced that 'the use of instruments, and the introduction of the hand into the womb, as too frequently employed by the unskilful, is more desparate than the most desparate case of labour left to nature.'

Case 7. The Man-midwifery Controversy

SIR RICHARD MANNINGHAM, 1690-1759. *An exact diary of what was observ'd during a close attendance upon Mary Toft, the pretended rabbet-breeder.* London, 1726.

Since the time of Paré in the mid-16th century, surgeons had been more willing to involve themselves in obstetrics, having previously considered such a practice beneath their dignity. Surgical training and the attendant right to use instruments were unavailable to women. With the growing acceptance of instrumental delivery in the 18th century, the paradoxical situation arose in which men were assuming a larger role in midwifery and women were being shut out. This state of affairs occasioned a long and heated dispute, particularly in 18th century England, regarding the proper role of the man-midwife with those opposed missing no opportunity to attack.

In 1726, occurred an incident that did little for the reputation of the men-midwives. Mary Toft of Godalming, in Surrey, gave birth to a litter of rabbits. The local man-midwife, John Howard, a man of considerable midwifery experience, delivered several of these rabbits himself. News of this marvellous occurrence soon reached London. Intrigued, King George I appointed Nathanael St. André, a Swiss anatomist attached to the Royal Court, to investigate further. St. André arrived in Godalming just in time for the labour of the 15th rabbit and proceeded to deliver Mary Toft of 'the entire trunk stripped of its skin, of a rabbet of about four months growth.' Still unconvinced, the King sent Sir Richard Manningham, a distinguished obstetrician to discover the truth. The sceptical Manningham soon uncovered the fraud and presented his report in the pamphlet displayed here. Mary Toft confessed under the threat of a painful experiment to test the veracity of her story. She did in fact deliver rabbits, or at least parts of them, but only after having, with the help of an accomplice, conveyed them into her body, hoping possibly to obtain the Royal pension which such a marvel would deserve.

LEMUEL GULLIVER. *The anatomist dissected; or, The Man-midwife finely brought to bed.* Westminster, 1727.

Needless to say, the exposure of the fraud occasioned many pamphlets, broadsheets and caricatures which satirized the more gullible individuals involved and made great fun out of the physical aspects of the case. The pamphlet displayed is by Jonathan Swift. Speaking as the worldly Gulliver, he observes on one of the more suspicious details of the case which passed by St. André: 'Here a wife man would have smelt a rat instead of a rabbit.'

One of the more memorable illustrations of Mary Toft and her rabbits appears in William Hogarth's engraving 'Credulity, superstition and fanaticism.' A reproduction of a detail from this print is displayed in this case.

A Man-midwife, or a newly discovered animal, not known in Buffon's time

The alleged contrast between the midwife and the man-midwife is nowhere more graphically illustrated than in this print which appeared as the frontispiece to John Blunt's (i.e. S.W. Fores') *Man-midwifery dissected* in 1793. Blunt considered man-midwifery 'a personal, a domestic and a national evil', but in spite of such attitudes, opposition to men-midwives had fallen off sharply in Great Britain by the end of the 18th century.

ELIZABETH NIHELL, b. 1723. *A treatise on the art of midwifery. Setting forth various abuses therein, especially as to the practice with instruments.* London, 1760.

It is not surprising that women in labour originally feared the approach of men-midwives with their bags of instruments. Piercing and dismembering instruments had long been used in cases where normal delivery was impossible and the distinction between these destructive instruments and the newly-introduced harmless obstetrical forceps was not immediately made. Elizabeth Nihell, midwife and tireless opponent of the men-midwives, knowing well that the use of instruments was the sole right of men, lumped all instruments and 'instrumentarians' together in this work which is essentially a sustained attack on men-midwives.

LAURENCE STERNE, 1713-1768. *Tristram Shandy... six unpublished illustrations in aquatint from the original copper-plates engraved in 1820.* London, 1888.

Dr. Slop, man-midwife 'of about four feet and a half perpendicular height, with a breadth of back and a sesquipedality of belly which might have done honour to a sergeant in the Horse Guards' whose instrumental interference had unfortunate effects on the nose of Tristram Shandy, is an enduring character in English literature. Dr. Slop was modelled on Dr. John Burton (q.v.) but the caricature was unfair, being inspired by political differences between Burton and the uncle of the author rather than the former's lack of obstetrical ability or stature.

PHILIPPE HECQUET, 1661-1737. *De l'indecence aux hommes d'accoucher les femmes.* Paris, 1744.

The impropriety of men assisting at births was long a matter of debate. In 1522, a Dr. Wertt of Hamburg was burned to death at the stake for attempting to observe a delivery while he was disguised in women's clothes. Subsequent offenders against propriety

were not so harshly dealt with but the view that the presence of men in the birth chamber was an affront to modesty and decency was frequently expressed. Hecquet's work on this theme was originally published in 1708. Hecquet was a highly moralistic physician, described by his great contemporary, the physiologist Albrecht Haller, as one who would prefer the chastity of a woman to her life, but his views were indicative of the attitudes men-midwives had to overcome in the 18th century.

FRANK NICHOLLS, 1699-1778. *The petition of the unborn babes to the censors of the Royal College of Physicians of London.* London, 1751.

In Great Britain, men-midwives were attacked not only by midwives but also by prominent male members of the medical profession, such as Frank Nicholls. The *Petition* is a satirical attack on the men-midwives as it might be expressed by the soon-to-be-born: 'By wicked persuasions our mothers are led into a confidence and reliance on the friendship and assistance of these ignorant men; and hire them at extravagant rates to distress, bruise, kill and destroy your petitioners.'

Case 8. The Introduction of Anaesthetics and the Conquest of Puerperal Fever

JOHN BURTON, 1710-1771. *An essay towards a complete new system of midwifry, theoretical and practical.* London, 1751.

For centuries the birth chamber was haunted by the prospect of death from puerperal fever, the most feared and most fatal of all diseases relating to childbirth. The first recorded description of the disease was given by Hippocrates in the 5th century B.C. but it was not until the middle of the 18th century that John Burton suggested that it might be contagious in nature and not until 1795 that Alexander Gordon, in his *Treatise on the epidemic fever of Aberdeen,* showed, in some measure, its infectious nature.

CHARLES WHITE, 1728-1813. *A treatise on the management of pregnant and lying-in women* ... The 2d ed., revised and enlarged. London, 1777.

Charles White, as chief surgeon at the Manchester Infirmary for nearly forty years, had spectacular success in controlling the incidence of puerperal fever, claiming 'Out of the whole number of lying-in patients whom I have delivered ... I have never lost one, nor to the best of my recollection, has one been greatly endangered, by the puerperal ... fever ... Some few indeed have had the puerperal fever, but this has evidently arisen from non-observance of the rules above laid down.' White's rules were directed toward the maintenance of a very high standard of hygiene and to the avoidance of a horizontal position for the newly-delivered mother. White believed, rightly, that the horizontal position could lead to the absorption of matter responsible for the disease.

OLIVER WENDELL HOLMES, 1809-1894. *The contagiousness of puerperal fever.* Boston, 1843.

If puerperal fever was, in fact, shown to be contagious, a large part of the responsibility for its transmission would rest with the medical profession. In his paper on the fever, which appeared in the first volume of the *New England quarterly journal of medicine and*

surgery, Holmes confronted this implication directly: 'The practical point to be illustrated is the following: The disease known as puerperal fever is so far contagious as to be frequently carried from patient to patient by physicians and nurses.' Holmes' paper was a remarkable piece of detective work, the contagious nature of the disease being deduced from the observation of a large number of cases, while the agent and mode of infection were as yet unknown. Holmes anticipated and received a great deal of opposition to his theory from other medical men who were presented with the possibility that they had been the unwitting agents in the deaths of many women, but he was steadfast on their responsibility: 'The time has come when the existence of a private pestilence in the sphere of a single physician should be looked upon not as a misfortune but as a crime.'

IGNÁC FÜLÖP SEMMELWEIS, 1818-1865. *Die Aetiology, der Begriff und die Prophylaxis des Kindbettfiebers,* 1863, in *Semmelweis' gesammelte Werke.* Jena, 1905.

It remained for Ignác Semmelweis to demonstrate that puerperal fever was definitely caused by the absorption of infectious material. As a result of his investigations, Semmelweis showed that the infectious agent was 'decomposed animal organic material' carried to the patient by 'the examining finger, the operating hand, the bed-clothes, the atmospheric air, sponges, the hands of midwives and nurses ...', in short anything which came into contact with the genitals of the mother. Semmelweis' discoveries were bitterly opposed. Driven from Vienna, the scene of his original investigations and later committed to an insane asylum suffering from acute persecution mania following the publication of his book, Semmelweis became one of the martyrs of science. His *Die Aetiology ... des Kindbettfiebers* is considered to be of legendary rarity and is regrettably represented here by its appearance in the collected works.

SIR JAMES YOUNG SIMPSON, 1811-1870. *Anaesthesia; or, The employment of chloroform and ether in surgery, midwifery, etc.* Philadelphia, 1849.

The search for effective pain-killing substances must be as old as the history of medicine itself but it was not until the introduction of ether and chloroform in the 1840's that anaesthesia became a safe and effective part of surgical operations. The early history of anaesthetics is muddied by conflicting claims of priority, but it is clear that Simpson was the first to use chloroform as an anaesthetic agent in place of ether, the successful use of which he had learned from reports of American experiments. Simpson campaigned vigorously for the acceptance of chloroform in childbirth, having to overcome not only medical arguments concerning its effectiveness and safety but also religious arguments arising from a rigid interpretation of the Biblical curse 'In sorrow thou shalt bring forth children.' Simpson triumphed over these latter arguments by quoting Scripture in return: 'And the Lord caused a deep sleep to fall upon Adam; and he slept; and He took one of his ribs and closed up the flesh instead thereof.'

WALTER CHANNING, 1786-1876. *A treatise on etherization in childbirth.* Boston, 1848.

Ether was first used in childbirth in America in 1847 and while Channing was not the first to use it, he was an early and eager advocate. Having examined the results of over 500 cases in which ether was used, Channing was thoroughly convinced of its safety and effectiveness and wrote: 'With regard to contra-indications to etherization ... I have no experience to offer. I have met with none.'

THE OBSTETRICAL instruments and the 'Man-midwife' engraving are exhibited with the kind permission of the Museum of the History of Medicine, Academy of Medicine, Toronto.

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The cover illustration is from Jacob Rüff, *Ein schön lustig Trostbüchle*. 1569.